3 Equations_Substitution and Elimination Together

Thursday, January 19, 2012
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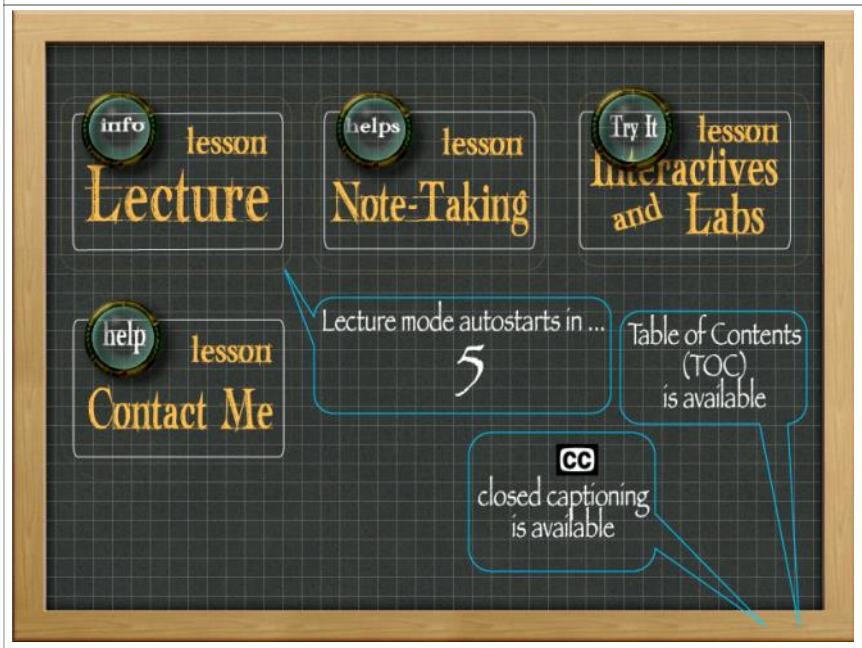
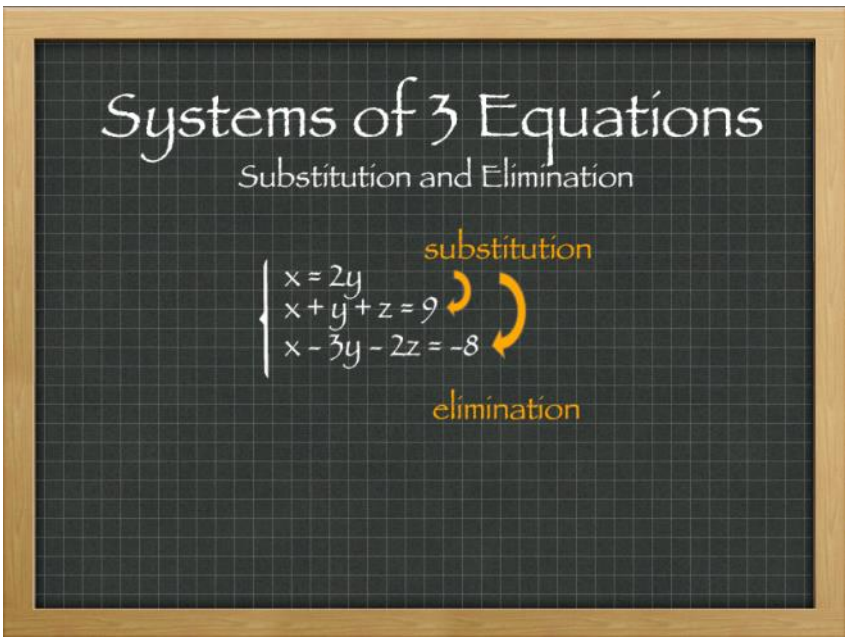
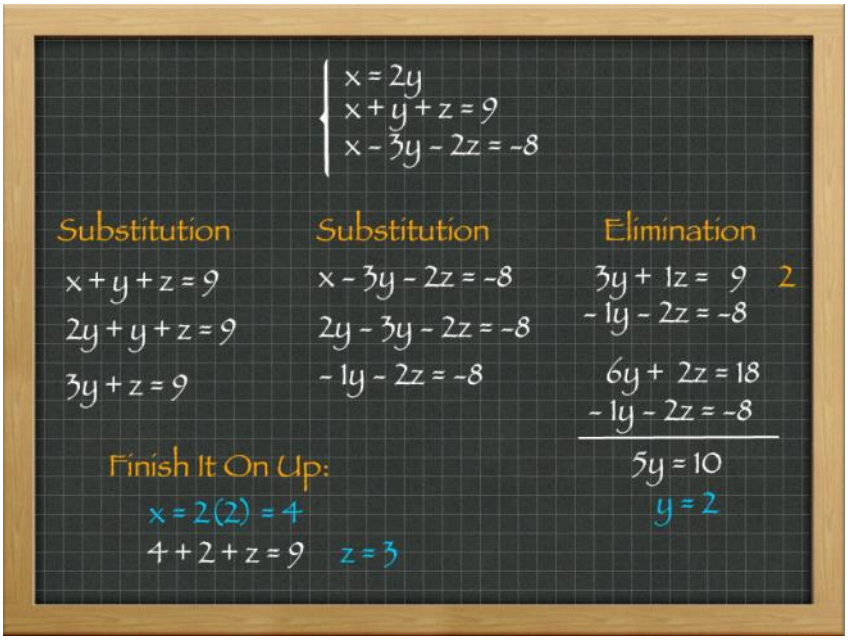
Slides	Notes
	
	You have been solving systems of equations with two equations for quite some time now. In this lesson we will work on how to do systems of three equations and I will highlight how you can blend applying substitution twice and then elimination to make these easier to solve. In this example, you probably see that substituting in the x - 2y will be an easy step. Though, you may only think to substitute it in to just one of the other equations. If you substitute in to both of the other ones you will find that elimination will be a really easy next step. Let's try one.



We will substitute in the 2y for x into each of the other two equations and solve each one.

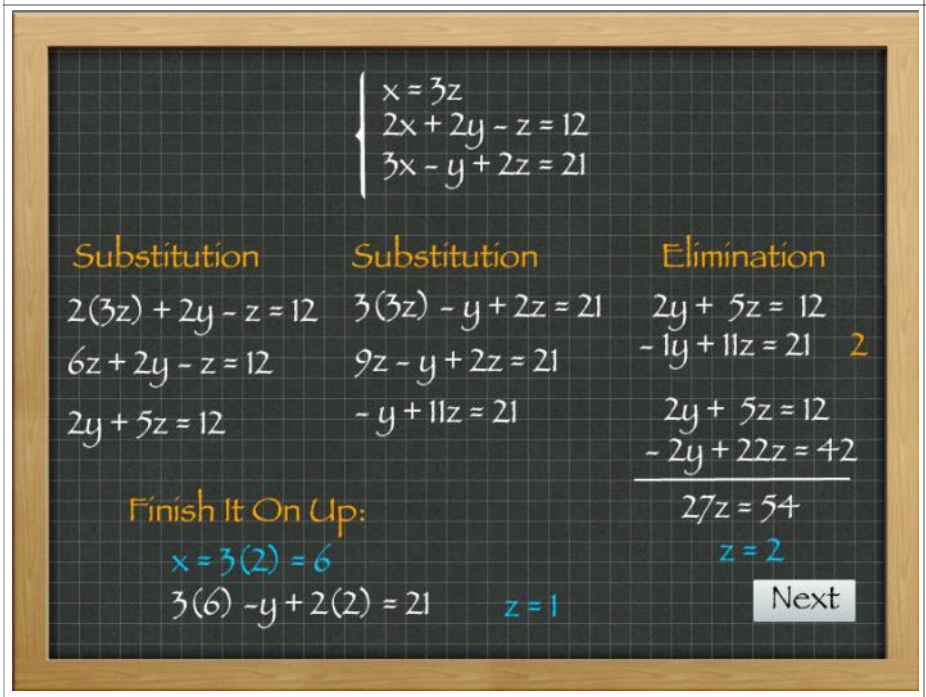
Now we have just two equations and two variables left. We will use elimination. If we multiply a two to each term of the first equation here, we can eliminate the z. Now we will solve for y.

Y = 2.

Now that we have y, we will revisit the original equations. That first one will be quick to work with. That gives us x = 4.

Now to use one of the other ones to get z. That second one looks good. Substitute in the other two variables that we solved.

z = 3



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